

REP ID: \_\_\_\_\_

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MONTANA FISH AND GAME DEPARTMENT  
FISHERIES DIVISION

JOB COMPLETION REPORT  
RESEARCH PROJECT SEGMENT

State of Montana Name Statewide Creel Census and  
Project No. F-4-R-17 Statistical Services  
Job No. I Title Statewide Creel Census  
Period Covered: July 1, 1967 through June 30, 1968

Abstract:

Statewide creel census data were obtained from 389 anglers through their entries in the Fisherman Log. Through Fisherman Logs, 5,780 fishing trips were reported with a catch of 35,374 fish, exclusive of coarse fish. Average catch per hour during the regular fishing season was 1.5 fish per hour and the average winter catch was 1.3.

A comparison of fishing pressure from month to month throughout the year was obtained through postcard questionnaires sent to a sample of resident license holders.

Recommendations:

The fisherman log program should be continued. Based on the recommendation of statistician David W. Turner, use of tally cards should be discontinued. Questionnaires should be sent out in waves as in the past to determine fishing pressure.

Techniques Used:

Pocket-sized Fisherman Logs were distributed to cooperative sportsmen. At the end of the fishing season, a letter was sent to the log holders asking them to return the booklets to the Fish and Game Department. Records were transcribed from the logs and the logs were returned to their owners.

The following information was tabulated for each lake and stream from which log data were received: (a) Number of fishermen; (b) Hours fished; (c) Catch per hour; (d) Number of each species of fish; (e) Average length of each species of fish; and, (f) Percentage species composition.

At the beginning of the fishing season, salmon-colored tally cards (Figure 1) were sent to a random sample of 10,000 resident fishing license holders. A letter was enclosed requesting the fisherman's cooperation in keeping the record throughout the general fishing season. Those wishing to cooperate returned a white postcard (Figure 2) that was enclosed. They were instructed to retain the tally card and to record three things each time they fished: (1) Date; (2) Name of lake or stream; and, (3) Nearest town or county.

If you need another tally card when this one is full, please contact the Montana Fish & Game Department, Helena, Montana 59601.



## RECORD OF 1967 FISHING TRIPS

WE NEED INFORMATION ON THE NUMBER OF DAYS ANGLERS SPEND ON MONTANA'S STREAMS AND LAKES.

IF YOU WILL HELP, PLEASE RETURN THE ENCLOSED, STAMPED WHITE CARD. IF YOU DO NOT CARE TO PARTICIPATE, RETURN OF THE WHITE CARD IS NOT NECESSARY.

THANK YOU.

PLEASE LIST ALL TRIPS EVEN IF NO FISH  
WERE CAUGHT

[illegible]

## RECORD MONTANA FISHING ONLY

[illegible]

**1967 MONTANA  
FISHING TRIP TALLY**

(back)

State of Montana  
DEPARTMENT OF FISH & GAME  
Helena, Montana 59601



**RETURN OF THIS CARD WILL BE REQUESTED AFTER 1967 SEASON**

662

(Name and address from list of resident fishing license buyers. This was placed so it could be used in a window envelope)

(front)

FIGURE 1. -- Fishing trip tally card.

If you intend to keep the record of your fishing trips,  
please return this card.

Nº 0662

I will keep a record of where I fish in 1967 on the FISHING  
TRIP TALLY.

Return of this postcard places you under no obligation other than  
voluntary cooperation. Its purpose is to enable the Montana Fish and  
Game Department to estimate the number of sportsmen who will partici-  
pate in this survey and to identify those interested. If this is improperly  
addressed to you, please show proper address below:

Name.....

Street.....

City.....

FIGURE 2. -- Postcard returned by cooperators in fishing trip tally  
card program.

In addition, fishing pressure questionnaire postcards (Figure 3) were mailed  
to a random sample of 500 resident license holders each month throughout the year.

#### Findings:

##### Fisherman Logs

The Fisherman Log census this year was divided into two periods as in the  
past. One period was from the end of the 1966 regular fishing season to the  
beginning of the 1967 regular fishing season (December 1, 1966 to May 20, 1967);  
and the other period was during the regular fishing season (May 21, 1967 to  
November 30, 1967).

Three hundred eighty-nine Fisherman Logs were returned to the Fish and Game  
Department. This represented 4,648 fishing trips and 18,865.2 hours of fishing  
during the regular season. On these trips, anglers took 28,981 fish, exclusive  
of coarse fish, for an average catch of 1.5 fish per man-hour and 6.2 per man-day.  
During the winter period, 1,132 fishing trips and 4,770.6 hours produced 6,393  
fish for an average catch of 1.3 per man-hour and 5.6 per man-day. The species  
composition of the catch recorded on logs is presented in Table 1.

The information tabulated by individual water will be distributed to the  
respective project leaders for inclusion in their lake and stream survey files.  
It will also be stored on magnetic tape in the Central Data Processing Section.

TABLE 1. -- Species composition of harvest reported in Fisherman Logs

WINTER SEASON December 1, 1966 - May 20, 1967		REGULAR SEASON May 21, 1967 - November 30, 1967	
<u>6,369 game and sport fish</u>		<u>28,981 game and sport fish</u>	
<u>Species</u>	<u>Percent</u>	<u>Species</u>	<u>Percent</u>
Rainbow trout	40	Rainbow trout	44
Cutthroat trout	5	Cutthroat trout	12
Brook trout	3	Brook trout	16
Brown trout	7	Brown trout	10
Dolly Varden	*	Dolly Varden	*
Lake trout	*	Lake trout	*
Kokanee	*	Golden trout	*
Coho	*	Kokanee	3
Grayling	*	Coho	1
Whitefish	32	Grayling	1
Largemouth bass	1	Rainbow x cutthroat hybrid	*
Walleye or sauger	1	Whitefish	3
Northern pike	*	Largemouth bass	1
Sunfish	*	Walleye or sauger	1
Yellow perch	8	Northern pike	*
Channel catfish	*	Paddlefish	*
Bullhead	1	Sunfish	1
Burbot	*	Yellow perch	4
Goldeye	*	Crappie	*
		Channel catfish	*
		Bullhead	*
		Burbot	*
		Sturgeon	*
		Goldeye	*

\* Less than  $\frac{1}{2}$  of 1 percent

<u>74 coarse fish</u>		<u>409 coarse fish</u>	
<u>Species</u>	<u>Percent</u>	<u>Species</u>	<u>Percent</u>
Suckers	93	Sculpin	1
Carp	7	Suckers	55
		Carp	10
		Northern squawfish	17
		Chub	8
		Sheepshead	2
		Shiner	7

Dear Fisherman:

Nº 11501

In our continuing effort to maintain and improve fishing in Montana, we need to know how many days people spend fishing during various periods of the year. As you are among the few fishermen selected at random to receive this request, it is most important that you fill out and return the attached postage paid card.

PLEASE RETURN THE QUESTIONNAIRE WHETHER YOU FISHED OR NOT.

Please indicate below number of days you fished in Montana from April 1 through April 30. Count any portion of a day as a complete day. Do NOT include fishing in Glacier or Yellowstone National Parks. PLEASE RETURN THIS CARD EVEN IF YOU DID NOT FISH.

I fished \_\_\_\_\_ days in April.  
No. of days

I did not fish in April \_\_\_\_\_.

Thank you for your help.

MONTANA FISH  
AND GAME DEPARTMENT

FIGURE 3. -- Message portions of fishing pressure questionnaire postcard (a double postcard).

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#### Tally Cards

As mentioned under Techniques Used, a tally card and a letter requesting cooperation were sent to each of 10,000 fishermen whose names were drawn at random from the 1966 license list. Of these, 1,523 indicated their willingness to assist in the program by returning the white postcard (Figure 2). However, at the end of the season, only 525 tally cards were received in response to a letter to cooperators requesting their return.

The tally card program was reviewed by Mr. David W. Turner who was engaged for a short period as a statistical consultant. He compared information from tally cards with that from previous surveys in which questionnaires were sent out in waves. Each wave covered fishing for a different two week period. The

tally cards were more economical in terms of items of information obtained per dollar spent for postage, etc. However, the percentage of persons originally contacted who furnished data was so low Mr. Turner felt the data were biased and that the wave system yielded more valid information. He recommended the wave system be used in preference to tally cards.

### Fishing Pressure Questionnaire Postcard

Data from fishing pressure questionnaire postcards returned by resident license holders is presented in Table 2. These data give information on the relative fishing pressure from month to month.

TABLE 2. -- Data from 500 fishing pressure questionnaire cards sent each month to residents

Month	No. of Fishermen Reporting	No. of Days Fished	Avg. No. Days Fished
<u>1967</u>			
May	300	1,062	3.54
June	301	1,138	3.78
July	269	1,138	4.23
August	311	1,023	3.29
September	303	712	2.35
October	316	332	1.05
November	300	159	0.53
December	272	125	0.46
<u>1968</u>			
January	354	342	0.97
February	308	157	0.51
March	304	227	0.75
April	307	433	1.41

Prepared by George D. Holton

Approved by Arthur N. Whitney

Date April 15, 1969